

STAT

6 March 1953

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file project 2028

This document is part of an integrated file. If separated from the file it must be subjected to individual systematic review.

Dear Bill:

Received your letter of 26 February and neglected to prepare an answer until I could get the report of the tests, together with the curves, that were run on 10-11 February on your Gasoline Engine Generator.

The tests that we conducted were relatively incomplete and were concerned primarily with regulation. I am enclosing a copy of the report and the curves.

Referring to the graphs, we find that the output voltage falls rather rapidly as a function of power output and the power may even reverse itself from some maximum point. This characteristic is common to all self-excited generators and alternators and, while not in itself detrimental, it does place severe limitations upon the unit's power rating. It is our opinion that the design of this type of alternator is considerably less satisfactory than is the permanent magnet rotating field type that is in common military use. We have run considerable tests on the P.M. type and find them far superior in size, weight, and performance to any of the self-excited or induction designs.

When [redacted], first fired up your engine generator rather severe erratic operation was noticed. We investigated and found that the leads to the field rectifier were shorting due to loss of the insulation. The rectifier was cleaned up, the leads re-insulated, and the unit re-assembled. The unit then appeared to be operating normally.

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At the present time, we have been unable to find any interest in the larger size units. Military equipment is available which satisfied our requirements along these lines. We seriously doubt if it would be possible to get the 100 watt unit down into something of the order of 8 or 9 pounds and to get the unit regulation up to the 10 per cent figure that we require. We sure thank you for your consideration and the information on the unit.

Yours truly,

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WWB/tls

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February 26, 1953

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Dear Bill:

I have been trying to get a letter off to you the last couple of days to advise you that [] would be in Washington this week and would contact you. He surely by now has arrived and already gotten in touch with you but I will write anyhow.

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I would be most interested to receive an official or unofficial report of the test you conducted on the equipment two weeks ago. I emphasized to [] that it was not necessary to send their man back with the unit. We tried in every possible way as a matter of fact to discourage it. Whether he did any good or got in your hair I will take no responsibility for.

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I got a report that the regulation was not particularly good but this information is so sketchy that I have no comment. Either the engine does not have fast enough response to accept the heavier load or there is some other situation that I do not know about.

As I explained to the [] people and [], our thought was simply that we would send a sleeve engine and alternator with the regulator to you. We fully appreciate that it does not match your specifications in size or weight or power output. However, if we can demonstrate to you our ability to produce such an assembly then we could proceed with something more suitable for your work. I feel confident that we can make you the 80 or 100 watt package to meet your specifications. Naturally as we go up in power the job becomes easier.

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Can you let me know some of your feelings?

Kindest personal regards.

Cordially yours,

STAT

President

WVS:md

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Project 2028

March 16, 1953

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Dear Bill:

Thank you very much for the comprehensive report. I turned this over immediately to [redacted] but I have had him so snowed under I do not think he has had a chance to really evaluate the data.

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Incidentally, [redacted] has joined us full time starting last week. We will be able to expedite this stuff through much faster in the future.

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As soon as I get more information I will contact you. Our feeling for some time has been that we would like to bring out an 80 watt unit which would match your desired 8 or 9 pounds.

Kindest personal regards.

Cordially yours,

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[redacted]
President

WVS:md